



## *X-Plain™* *Lupus*

### **Reference Summary**

Lupus is a disease that can affect almost every organ in the body. It causes symptoms that can vary from very mild to life threatening.

Understanding lupus is an important part of treating it. If you or a loved one have or may have lupus, this program will help you understand it. This reference summary explains what lupus is and treatment options.

#### **Lupus**

To understand lupus, it is important to understand the immune system. The immune system is a combination of specialized blood cells, called white blood cells, and the chemicals they secrete, called antibodies.

The body recognizes foreign cells or organisms, such as viruses and bacteria. It fights them using both white blood cells and antibodies. The white blood cells and antibodies find the foreign material and destroy it by breaking it down. The immune system is very good at protecting us from microbes and viruses.

Unfortunately, sometimes the immune system mistakes body cells for foreign material, causing the immune system to attack the body itself. This self-destruction causes inflammation and damages various body tissues.

Lupus can affect many parts of the body, including the joints, skin, kidneys, heart, lungs, blood vessels, and brain. When the immune system mistakes body cells for foreign material, an autoimmune disease results. Lupus is an autoimmune disease. The antibodies involved in lupus are called autoantibodies, which means antibodies against the body itself.

The causes of lupus are unknown. Most likely, a combination of hereditary, environmental, and possible hormonal factors contributes to lupus. Lupus is NOT contagious, which means it cannot be spread from one person to another.

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## Types Of Lupus

Lupus is actually a general term; there are several kinds of lupus. Systemic Lupus Erythematosus, or SLE, is the most common form of the disease. The word systemic means the disease can affect many parts of the body.

Discoid Lupus Erythematosus is another type of lupus that mainly affects the skin. A red, raised rash may appear on the face, scalp, or elsewhere. The rash may last for days or years and may recur. A small percentage of people who have discoid lupus also develop SLE at some point.

Drug-induced lupus is a form of lupus caused by medication. It causes some symptoms similar to those of lupus that go away when the drug is no longer taken.

Neonatal lupus is a type of lupus that affects newborn babies of women who have lupus or other immune system disorders. Neonatal lupus is very rare, and most infants born to mothers with lupus are completely healthy.



## Symptoms

The symptoms of lupus can be mild or serious. Lupus usually initially affects people between 15 and 45, but it can occur during childhood or later in life also.

Many symptoms of lupus are the same as other diseases. Symptoms of lupus vary from patient to patient or from time to time for the same patient. This makes it difficult to diagnose lupus.

The most common symptoms of lupus include

- extreme fatigue
- painful or swollen joints called arthritis
- inexplicable fever
- skin rashes
- kidney problems

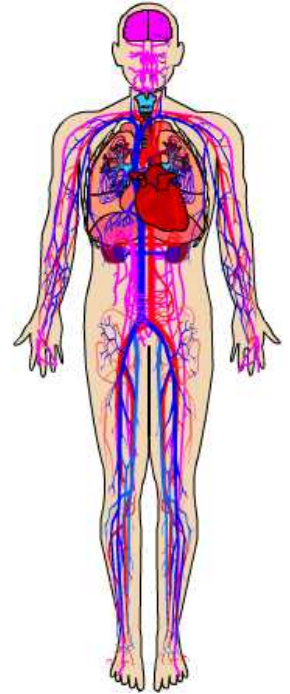
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Patients with lupus go through cycles of symptoms, called flares, and periods of wellness, called remission. Other symptoms of lupus include chest pain, hair loss, sensitivity to the sun, pale or, purple fingers and toes from cold and stress, headaches, dizziness, depression, and seizures.

Lupus can affect the following organs:

- kidneys
- brain and spinal cord
- blood vessels
- blood
- lungs
- heart



## Diagnosis

Diagnosing lupus can be difficult. It could take months or even years for doctors to accurately diagnose it.

It is important to provide the doctor with a complete, accurate medical history in order to get an accurate diagnosis.

The medical history, along with a physical examination and laboratory tests, can help the doctor diagnose lupus. Making a diagnosis may take time as new symptoms appear.

No single test can show whether a person has lupus, but several laboratory tests may help diagnose it. Useful tests identify certain blood autoantibodies, often present in people with lupus.

Some tests are used less often but may be helpful if the symptoms' cause remains unclear. The doctor may order a biopsy of the skin or kidneys if they are affected. The purpose of a biopsy is to take sample tissue for analysis in the lab.

Some doctors may order a syphilis test because lupus antibodies in the blood may cause the test to be falsely positive. In such a case, a positive test does not mean that a patient has syphilis.

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All tests are tools that give the doctor more information for a diagnosis. The doctor will look at the medical history, symptoms, and test results to determine if a person has lupus.

Other laboratory tests are used to monitor the progress of lupus once it has been diagnosed. A complete blood count (CBC), urinalysis, blood chemistries, and erythrocyte sedimentation rate (ESR) tests can provide important information.

Another common test that measures the blood level of a group of proteins called complements. People with lupus often have low complement levels, especially when lupus flares up.

## **Treatment**

There is no cure for lupus. However, treatment options to control symptoms are available. Most people with lupus can lead active, healthy lives.

The range and effectiveness of treatments for lupus have increased greatly, giving doctors more choices in how to treat the disease.

Once lupus is diagnosed, the doctor develops a treatment plan based on the patient's age, gender, health, symptoms, and lifestyle.

Treatment plans should meet the individual patient's needs and may change over time. To develop a treatment plan, the doctor tries to:

- prevent flares
- treat flares when they do occur
- minimize complications

The doctor and patient should reevaluate the plan regularly to ensure that it is as effective as possible.

Several types of drugs are used to treat lupus. For people with joint pain, fever, and swelling, drugs that decrease inflammation, referred to as nonsteroidal anti-inflammatory drugs, or NSAIDs, are often used. While some NSAIDs are available over the counter, a doctor's prescription is necessary for others.

Common side effects of NSAIDs include stomach upset, heartburn, diarrhea, and fluid retention.

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Some lupus patients also develop liver and kidney inflammation while taking NSAIDs. It is especially important to stay in close contact with the doctor while taking NSAIDs.

Antimalarials are another type of drug commonly used to treat lupus. These drugs were originally used to treat malaria, but they are also useful in treating lupus.

Antimalarials may be used alone or in combination with other drugs to treat fatigue, joint pain, skin rashes, and inflammation of the lungs. Continuous treatment with anti-malarials may prevent flares from recurring.

Side effects of antimalarials may include stomach upset and, very rarely, damage to the retina of the eye.

The most common treatment for lupus is corticosteroid hormones. Corticosteroids are related to cortisol, a natural anti-inflammatory hormone. They hold back inflammation very quickly.

Corticosteroids can be given orally, in creams applied to the skin, or by injection. Since they are potent drugs, the doctor will use the lowest dose with the greatest benefit.

Short-term side effects of corticosteroids include swelling, increased appetite, weight gain, and emotional ups and downs. These side effects usually stop when the drug is stopped.

It can be dangerous to stop taking corticosteroids suddenly, so it is very important that a doctor recommend changes for the corticosteroid dose.

Sometimes doctors give very large amounts of corticosteroid for a short time by vein. With this treatment, typical side effects are less likely and slow withdrawal is not necessary.

Long-term side effects of corticosteroids can include stretch marks, excessive hair growth, weakened or damaged bones, high blood pressure, damage to the arteries, high blood sugar, infections, and cataracts.

Typically, the higher the dose of corticosteroids, the more severe the side effects are. The longer corticosteroids are taken, the greater the risk of side effects becomes.

People with lupus who use corticosteroids should talk to their doctors about taking supplemental calcium and Vitamin D. These supplements reduce the risk of fragile bones called osteoporosis.

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For patients whose kidneys or central nervous systems are affected by lupus, a type of drug called an immunosuppressive may be used. Immunosuppressives hold the immune system back by blocking the production of some immune cells.

Immunosuppressives may be given orally or by IV.

Side effects of immunosuppressives may include nausea, vomiting, hair loss, bladder problems, decreased fertility, and increased risk of cancer and infection. The longer the treatment with immunosuppressives, the higher the risk of side effects becomes.

Since some treatments may cause harmful side effects, it is important to tell the doctor about any side effects right away. It is also important NOT to stop or change treatment without asking the doctor first.

## **Quality Of Life**

Despite the symptoms of lupus and the possible side effects of treatment, people with lupus CAN have a high quality of life.

One way to manage lupus is to understand the disease and its symptoms. Learning to recognize the warning signs of a flare-up can help the patient take steps to reduce the intensity.

Developing strategies to prevent flare-ups can be helpful. Examples of preventative strategies include limiting exposure to the sun or scheduling adequate rest and quiet times.

It is important for people with lupus to receive regular medical care instead of looking for help only when symptoms get worse. Having a medical exam and tests done on a regular basis allows the doctor to note changes.

People with lupus should receive regular preventive health care, such as gynecological and breast exams.

Regular dental care helps prevent potentially dangerous infections.

If a person is taking corticosteroids or antimalarial medications, he or she should have a yearly eye exam to screen for and treat eye problems.

For people with lupus, staying healthy takes extra effort and care, so it is especially important to maintain wellness and keep stress low. Some stress reduction measures

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may include exercise, relaxation, meditation, and prioritizing ways to spend time and energy.

Having a good support system is very important. A support system may include family, friends, medical professionals, community organizations, and organized support groups.

## **Summary**

Lupus is a disease that causes the immune system to attack healthy body tissue. The symptoms of lupus are varied and may be like those of other diseases. This makes lupus difficult to diagnose.

Several options are available to treat lupus. This makes it possible for people with lupus to remain active in life, family, and work.

Successful treatment of lupus depends on ·

- good communication with the doctor
- learning about lupus
- having regular checkups
- maintaining a positive attitude through stress management and relaxation

Your healthcare provider is available to answer any further questions you might have.

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